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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,580	12/21/2004	Carl L Christensen	PU020294	7751

7590

01/24/2006

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EXAMINER

NGUYEN, BRIAN D

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/518,580	Applicant(s) CHRISTENSEN ET AL.	
	Examiner Brian D. Nguyen	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/21/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The applicant is requested to fill in blanks on pages 1, 8, and 12.

Claim Objections

2. Claims 2-11 are objected to because of the following informalities:

Claims 2-6 and 8-11, line 1, it is suggested to replace "apparatus" with --router--.

Claim 2, line 5, it is suggested to insert --residing in said first chassis-- after "demanding component".

Claim 3, line 11, it is suggested to delete "through".

Claim 7, line 6, it is suggested to change "said first chassis" to --said second chassis--.

Claim 10, it is suggested to insert --first-- before "router matrix card" in line 3, "transmission" in line 7, and "router matrix card" in line 8.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toutant et al (2003/0099247) in view of Bernier et al (6,754,171).

Regarding claim 1, Toutant discloses a multi-chassis broadcast router, comprising: a first chassis (100 in figure 1 and 310 in figure 3A) in which a first routing engine (processing fabric 135 within processing card 130) and at least one clock-demanding component (line card 110), reside; a second chassis (320 in figures 3A and 3B) in which a second routing engine and at least one clock-demanding component, reside; a first link (399_A) coupling an input side of the first routing engine residing in the first chassis (310) and an input side of the second routing engine residing in the second chassis (320). Toutant does not specifically disclose a master clock residing in the first chassis, the master clock coupled to the at least one clock-demanding component, residing in the first chassis and to the at least one clock-demanding component, residing in the second chassis via the first link, the master clock supplying the at least one clock-demanding component, residing in the first chassis and the at least one clock-demanding component, residing in the second chassis with a common clock signal. However, Bernier discloses a master clock (412) residing in a first chassis (switch module 402), the master clock coupled to the at least one clock-demanding component (port 3 of NIM1 and ports 1-4 of NIM4 in figure 4), residing in the first chassis and to the at least one clock-demanding component (ports 1-2 of NIM2 of figure 6), residing in the second chassis (switch module 404 in figure 4 or 604 in figure 6) via the first link, the master clock supplying the at least one clock-demanding component, residing in the first chassis and the at least one clock-demanding component, residing in the second chassis with a common clock signal (see, for example, the dash line connecting port 3 of NIM1 to the master clock 612 in the switch module 602 to the master clock 618 and ports 1 and 2 of NIM2 in the switch module 604). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect and

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provide the clock signal from the first chassis to the second chassis as taught by Bernier in the system of Toutant in order to synchronize elements in the router.

Regarding claim 2, Toutant further discloses a first router matrix card (130_{0,1}) supportably mounted by the first chassis (100), the first routing engine (processing fabric 135) residing on the first router matrix card; and wherein the at least one clock demanding component, further comprises at least one input card and at least one output card (cards 110 include input and output ports, see input/output ports 132, 134, 136, 138 in figure 1). Note that Bernier discloses the master clock 212 residing on the first router matrix card 202.

Regarding claim 3, Toutant discloses a third chassis (330 in figure 4A) and a second link 399_B coupled between the first chassis 310 and the third chassis 330. Note that the master clock 212 disclosed by Bernier can provide the clock signal to slot 14 as shown in figure 2 and other slots 2-13 not shown in figure 2.

Regarding claim 4, Toutant discloses a third link 399_C coupling the second chassis 320 to the third chassis 330 as shown in figure 4A.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toutant in view of Bernier as applied to claim 4 above, and further in view of Gowldner (5,325,358).

Regarding claim 5, Toutant does not specifically disclose a redundant routing engine resides in each one of the first, second, and third chassis. However, using a redundant routing engine is well known in the art. Gowldner discloses a routing system that includes a redundant routing engine (see switching matrix KV1 and a redundant switching matrix KV2 in figure 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use redundant routing engines as taught by Gowldner in the system of

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Toutant in order to assure that backup routes can be switched given failure of the active routing engines.

Regarding claim 6, Toutant, Bernier, and Gowldner do not specifically disclose the fourth link, fifth link, and sixth link connecting the redundant routing engines in the first, second, and third chassis to form a second fully connected topology. However, it is obvious that all the redundant routing engines in the first, second, and third should be connected together to form the same fully connected topology as the primary routing engines in the first, second, and third chassis as shown in figure 4A of Toutant. The motivation is to form a backup system so that the backup system can be switched given failure of the primary system.

Allowable Subject Matter

6. Claims 7-11 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.

Conclusion

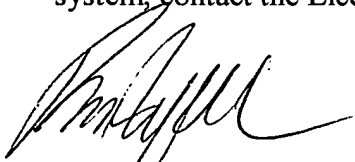
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oi et al (2003/0007493).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


1/18/06

BRIAN NGUYEN
PRIMARY EXAMINER